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PATENT  
ATTORNEY DOCKET NO. 041501-5580

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

In Ho AHN et al.

Application No.: 10/670,057

Filed: September 25, 2003

For: BACKLIGHT DEVICE OF LIQUID  
CRYSTAL DISPLAY DEVICE AND  
METHOD OF FABRICATING THE  
SAME

OFFICE OF PETITIONS

Mail Stop DAC

Commissioner for Patents  
U.S. Patent and Trademark Office  
Customer Window, Mail Stop DAC  
Alexandria, VA 22314

Sir:

**PETITION TO REVIVE AN ABANDONED  
APPLICATION UNDER 37 C.F.R. § 1.137(b)**

Pursuant to the provisions of 37 C.F.R. § 1.137(b), Applicants hereby petition to revive the above-referenced application which has been unintentionally abandoned for failure to respond to the Office Action dated September 7, 2005. The Office Action set a due date for response on December 7, 2005, with a statutory time limit expiring on March 7, 2006. A Notice of Abandonment dated June 13, 2006 was received from the U.S. Patent and Trademark Office by the undersigned on June 15, 2006. Thus, the date of abandonment was on March 7, 2006.

On December 2, 2005, Applicants filed an Amendment Transmittal Form and Amendment in response to the September 7, 2005 Office Action. Copies of these as-filed documents and USPTO-stamped return addressed postcard are attached, as required for the Petition.

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Applicants respectfully point out that the application number was incorrectly identified on the first page of the Amendment Transmittal Form, as well on the first page of the Amendment. However, all other pertinent information, such as attorney docket number, filing date, Title of the Invention, inventors' names, examiner's name, art unit number, and confirmation number, are correct on both the Amendment Transmittal Form and Amendment.

This petition is accompanied by:

- (1) The required reply or submission under 37 C.F.R. § 1.311, including a Notice of Appeal;
- (2) The fee of \$1,500.00 is to be deducted from Deposit Account 50-0310 to revive the unintentionally abandoned application; and
- (3) That the entire delay in filing the required reply until the filing of this petition was unintentional.


EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

**MORGAN, LEWIS & BOCKIUS LLP**

Dated: June 20, 2006

By: \_\_\_\_\_



David B. Hardy  
Reg. No. 47,362

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PLEASE STAMP AND RETURN TO SHOW RECEIPT OF:

In re application of: Confirmation No.: 4748

In Ho AHN, *et al.* Group Art Unit No.: 2875

Application No. 10/670,057 Examiner: J. Han

Filed: September 25, 2003

For: BACKLIGHT DEVICE OF LIQUID CRYSTAL DISPLAY DEVICE AND  
METHOD OF FABRICATING THE SAME

\*\*\*\*\*

1. Amendment Transmittal Form.
2. Amendment in response to the September 7, 2005 Office Action.



Date: December 2, 2005  
Attorney Docket No.: 041501-5580

DBH/fdb  
1-WA/2425543.1



PATENT  
ATTORNEY DOCKET NO.: 041501-5580

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	)	
	)	
In Ho AHN et al.	)	Confirmation No. 4748
	)	
Application No.: 09/670,057	)	Art Unit: 2875
	)	
Filed: September 25, 2003	)	Examiner: J. Han
	)	
For: BACKLIGHT DEVICE OF LIQUID	)	Mail Stop Amendment
CRYSTAL DISPLAY DEVICE AND	)	
METHOD OF FABRICATING THE	)	
SAME	)	

Commissioner for Patents  
U.S. Patent and Trademark Office  
**Mail Stop Amendment**  
Alexandria, VA 22314  
Sir:

**AMENDMENT**

In response to the Office Action dated September 7, 2005, the period for response to which extends through December 7, 2005, please amend the above-identified application as follows:

**IN THE CLAIMS:**

Claim 1 (Currently Amended): A backlight device for a liquid crystal display, comprising:

a substrate;

a light source including a first plurality of green light emitting diodes, a second plurality of blue light emitting diodes, and a third plurality of red light emitting diodes arranged along a first row direction on the substrate in an offset matrix-type configuration,

wherein white light emitting diodes are disposed exclusively at both ends of the configuration of the green, blue, and red light emitting diodes.

Claim 2 (Original): The device according to claim 1, wherein a first total number of the first plurality of green light-emitting diodes is larger than a second total number of the second plurality of blue light emitting diodes, and a third total number of the third plurality of red light emitting diodes is smaller than each of the first and second total numbers.

Claim 3 (Currently Amended): A backlight device for a liquid crystal display,  
comprising:

a substrate; and

a light source including a plurality of blocks each having a plurality of green, blue,  
and red light emitting diodes disposed on the substrate in an offset matrix-type  
configuration, and white light emitting diodes disposed exclusively at both ends of the  
configuration of the green, blue, and red light emitting diodes.

Claim 4 (Original): The device according to claim 3, wherein each block includes a total  
of six of the green, blue, and red light-emitting diodes.

Claim 5 (Original): The device according to claim 3, wherein each block includes three  
green light-emitting diodes, two blue light-emitting diodes, and one red light-emitting  
diode.

Claim 6 (Original): The device according to claim 3, wherein each block includes a first  
row having a first sequential arrangement of the plurality of light-emitting diodes in a first  
order of the green, blue, and green light-emitting diodes, and a second row having a  
second sequential arrangement of the plurality of light-emitting diodes in a second  
order of the blue, green, and red light-emitting diodes.

Claim 7 (Withdrawn): A backlight device for a liquid crystal display, comprising:

a light-guiding plate disposed at a rear of a liquid crystal display panel of the liquid crystal display;

a first light source for emitting light along at least one side of the light-guiding plate, the first light source having a first sequential arrangement of green, blue, and green light emitting diodes along a first row direction, and at least one white light emitting diode at one end of the first sequential arrangement of the green, blue, and green light emitting diodes;

a second light source for emitting light along the at least one side of the light-guiding plate, the second light source having a second sequential arrangement of blue, green, and red light emitting diodes along a second row direction different from the first row direction, and at least one white light emitting diode at one end of the second sequential arrangement of the blue, green, and red light emitting diodes;

a housing adjacent to the light-guiding plate affixing the first and second light sources and concentrating the light emitted from the first and second light sources along a first light direction; and

a reflecting plate disposed at a lower portion of the light-guiding plate for reflecting light leaking along a side of the liquid crystal display panel.

Claim 8 (Withdrawn): The device according to claim 7, wherein the respective white light-emitting diodes of the first and second light sources are arranged at the ends of the first and second row directions.

Claim 9 (Withdrawn): The device according to claim 7, wherein the housing includes aluminum.

Claim 10 (Withdrawn): The device according to claim 7, wherein the first and second light sources are arranged along both sides of the light-guiding plate.

Claim 11 (Withdrawn): A backlight device for a liquid crystal display, comprising:

- a main light-guiding plate disposed at a rear of a liquid crystal display panel of the liquid crystal display;

- a sub light-guiding plate disposed on an incident surface along one side of the main light-guiding plate;

- a first light source for emitting light along one side of the sub light-guiding plate, the first light source includes a first sequential arrangement of green, blue, and green light emitting diodes along a first row direction, and at least one white light emitting diode at an end of the first sequential arrangement of the green, blue, and green light emitting diodes;

- a second light source for emitting light along the one side of the sub light-guiding plate, the second light source includes a second sequential arrangement of blue, green, and red light emitting diodes along a second row direction different from the first row direction, and at least one white light emitting diode at an end of the second sequential arrangement of the blue, green, and red light emitting diodes;



a housing adjacent to the main light-guiding plate affixing the first and second light sources and concentrating the light emitted from the first and second light sources along a first light direction; and

first and second reflecting plates disposed at a lower portion of the main light-guiding plate for reflecting light leaking along a side of the liquid crystal display panel.

Claim 12 (Withdrawn): The device according to claim 11, wherein the second reflecting plate includes aluminum coated with silver.

Claim 13 (Currently Amended): A method of fabricating a backlight device for a liquid crystal ~~display~~ display, comprising:

forming a light source including a first plurality of green light emitting diodes, a second plurality of blue light emitting diodes, and a third plurality of red light emitting diodes arranged along a first row direction on a substrate in an offset matrix-type configuration,

wherein white light emitting diodes are disposed exclusively at both ends of the configuration of the green, blue, and red light emitting diodes.

Claim 14 (Original): The method according to claim 13, wherein a first total number of the first plurality of green light-emitting diodes is larger than a second total number of the second plurality of blue light emitting diodes, and a third total number of the third plurality of red light emitting diodes is smaller than each of the first and second total numbers.

Claim 15 (Currently Amended): A method of fabricating a backlight device for a liquid crystal display, comprising:

forming a light source including a plurality of blocks each having a plurality of green, blue, and red light-emitting diodes disposed on the substrate in an offset matrix-type configuration, and white light-emitting diodes disposed exclusively at both ends of the configuration of the green, blue, and red light-emitting diodes.

Claim 16 (Original): The method according to claim 15, wherein each block includes a total of six of the green, blue, and red light-emitting diodes.

Claim 17 (Original): The method according to claim 15, wherein each block includes three green light emitting diodes, two blue light emitting diodes, and one red light emitting diode.

Claim 18 (Original): The method according to claim 15, wherein each block includes a first row having a first sequential arrangement of the plurality of light emitting diodes in a first order of the green, blue, and green light emitting diodes, and a second row having a second sequential arrangement of the plurality of light emitting diodes in a second order of the blue, green, and red light emitting diodes.

Claim 19 (Withdrawn): A method of fabricating a backlight device for a liquid crystal display, comprising:

forming a light-guiding plate at a rear of a liquid crystal display panel of the liquid crystal display;

forming a first light source for emitting light along at least one side of the light-guiding plate, the first light source having a first sequential arrangement of green, blue, and green light-emitting diodes along a first row direction, and at least one white light-emitting diode at one end of the first sequential arrangement of the green, blue, and green light-emitting diodes;

forming a second light source for emitting light along the at least one side of the light-guiding plate, the second light source having a second sequential arrangement of blue, green, and red light emitting diodes along a second row direction different from the first row direction, and at least one white light emitting diode at one end of the second sequential arrangement of the blue, green, and red light emitting diodes;

forming a housing adjacent to the light-guiding plate affixing the first and second light sources and concentrating the light emitted from the first and second light sources along a first light direction; and

forming a reflecting plate at a lower portion of the light-guiding plate for reflecting light leaking along a side of the liquid crystal display panel.

Claim 20 (Withdrawn): The method according to claim 19, wherein the respective white light-emitting diodes of the first and second light sources are arranged at the ends of the first and second row directions.

Claim 21 (Withdrawn): The method according to claim 19, wherein the housing includes aluminum.

Claim 22 (Withdrawn): The method according to claim 19, wherein the first and second light sources are arranged along both sides of the light-guiding plate.

Claim 23 (Withdrawn): A method of fabricating a backlight device for a liquid crystal display, comprising:

forming a main light-guiding plate at a rear of a liquid crystal display panel of the liquid crystal display;

forming a sub light-guiding plate on an incident surface along one side of the main light-guiding plate;

forming a first light source for emitting light along one side of the sub light-guiding plate, the first light source includes a first sequential arrangement of green, blue, and green light emitting diodes along a first row direction, and at least one white light emitting diode at an end of the first sequential arrangement of the green, blue, and green light emitting diodes;

forming a second light source for emitting light along the one side of the sub light-guiding plate, the second light source includes a second sequential arrangement of blue, green, and red light emitting diodes along a second row direction different from the first row direction, and at least one white light emitting diode at an end of the second sequential arrangement of the blue, green, and red light emitting diodes;

forming a housing adjacent to the main light-guiding plate affixing the first and second light sources and concentrating the light emitted from the first and second light sources along a first light direction; and

forming first and second reflecting plates at a lower portion of the main light-guiding plate for reflecting light leaking along a side of the liquid crystal display panel.

Claim 24 (Withdrawn): The method according to claim 23, wherein the second reflecting plate includes aluminum coated with silver.

**REMARKS**

**Summary of the Office Action**

Claims 1 and 3 stand rejected under 35 U.S.C § 102(e) as being anticipated by Shimizu et al. (US 6,608,332).

Claims 13 and 15 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Shimizu et al.

Applicants wish to thank the Examiner for the indication that claims 2, 4-6, 14, and 16-18 recite allowable subject matter.

**Summary of the Response to the Office Action**

Applicants have amended claims 1, 3, 13, and 15 to further define the invention. Accordingly, claims 1-24 are pending for consideration with claims 7-12 and 19-24 having been withdrawn from consideration.

**All Claims Define Allowable Subject Matter**

Claims 1 and 3 stand rejected under 35 U.S.C § 102(e) as being anticipated by Shimizu et al. (US 6,608,332), and claims 13 and 15 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Shimizu et al. Applicants respectfully traverse these rejections as being based upon a reference that neither teaches nor suggests the novel combination of features recited by independent claims 1, 3, 13, and 15 as amended, and hence dependent claims 2, 4-6, 14, and 16-18.

Independent claims 1 and 3, as amended, both recite a backlight device for a liquid crystal display including, in part, "white light emitting diodes disposed *exclusively* at both ends of the configuration of the green, blue, and red light emitting diodes." Similarly, independent claims 13

and 15, as amended, both recite a method of fabricating a backlight device for a liquid crystal display including, in part, "white light emitting diodes disposed *exclusively* at both ends of the configuration of the green, blue, and red light emitting diodes."

In contrast to Applicants' claimed invention, the LED arrangement disclosed in FIG. 12 of Shimizu et al. explicitly requires placement of white LEDs 403 centered within each sub-arrangement of R, G, and B LEDs 401, 402, and 404. Accordingly, Applicants respectfully assert that Shimizu et al. fails to teach or suggest "white light emitting diodes disposed *exclusively* at both ends of the configuration of the green, blue, and red light emitting diodes," as required by amended independent claims 1, 3, 13, and 15, and hence dependent claims 2, 4-6, 14, and 16-18. Thus, Applicants respectfully request that the rejections under 35 U.S.C §§ 102(e) and 103(a) in view of Shimizu et al. be withdrawn.

### CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under

ATTORNEY DOCKET NO.: 041501-5580

Application No.: 10/670,057

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37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

**MORGAN, LEWIS & BOCKIUS LLP**

By: \_\_\_\_\_



David B. Hardy

Reg. No. 47,362

Dated: December 2, 2005

**CUSTOMER NO. 09629**

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PATENT  
ATTORNEY DOCKET NO.: 041501-5580

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In Ho AHN et al.	)	Confirmation No. 4748
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Application No.: 09/670,057	)	Art Unit: 2875
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Filed: September 25, 2003	)	Examiner: J. Han
	)	
For: BACKLIGHT DEVICE OF LIQUID	)	Mail Stop Amendment
CRYSTAL DISPLAY DEVICE AND	)	
METHOD OF FABRICATING THE	)	
SAME	)	

Commissioner for Patents  
U.S. Patent and Trademark Office  
**Mail Stop Amendment**  
Alexandria, VA 22314

Sir:

**AMENDMENT TRANSMITTAL FORM**

1. Transmitted herewith is an Amendment responding to the Office Action dated September 7, 2005.
2. Additional papers enclosed:
  - ☐ Drawings: ☐ Formal ☐ Informal (Correction)
  - ☐ Information Disclosure Statement
  - ☐ Form PTO-1449, \_\_\_\_\_ references included
  - ☐ Citations
  - ☐ Declaration of Biological Deposit
  - ☐ Submission of "Sequence Listing", computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.

3. Extension of Time

The proceedings herein are for a patent application and the provisions of 37 C.F.R. § 1.136(a) apply.

☒ Applicants believe that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicants have inadvertently overlooked the need for a petition and fee for extension of time.

☐ Applicants petition for an extension of time, the fees for which are set out in 37 C.F.R. § 1.17(a), for the total number of months checked below:

<u>Total Months Requested</u>	<u>Fee for Extension</u>	<u>[Fee for Small Entity]</u>
<input type="checkbox"/> one month	\$ 120.00	\$ 60.00
<input type="checkbox"/> two months	\$ 450.00	\$ 225.00
<input type="checkbox"/> three months	\$ 1,020.00	\$ 510.00
<input type="checkbox"/> four months	\$ 1,590.00	\$ 795.00

Extension of time fee due with this request: \$ 0.00.

If an additional extension of time is required, please consider this a Petition therefor.

☐ An extension for \_\_\_\_ months has already been secured and the fee paid therefor of \$\_\_\_\_ is deducted from the total fee due for the total months of extension now requested.

4. Constructive Petition

☒ EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).

5. Fee Calculation (37 C.F.R. §1.16)

CLAIMS AS AMENDED						
	Claims Remaining After Amendment		Highest No. Previously Paid	Present Extra	at Rate of	Total Fees
Total Claims (37 C.F.R. §1.16(c))	24	minus	24	0	x \$50 each=	+ \$
Independent Claims (37 C.F.R. §1.16(b))	8	minus	8	0	x \$200 each=	+ \$
[ ] First presentation of Multiple dependent claim(s)					\$360.00	+ \$
SUB-TOTAL =						\$
Reduction by ¼ for filing by a small entity						- \$
TOTAL FEE =						\$ 0.00

6. Fee Payment

- ☒ No fee is to be paid at this time.
- ☐ The Commissioner is hereby authorized to charge \$ 0.00 for the additional claims fee due to Deposit Account No. 50-0310.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, including fees due under 37 C.F.R. §§ 1.16 and 1.17, or credit any overpayment to Deposit Account 50-0310.

Respectfully submitted,

**MORGAN, LEWIS & BOCKIUS LLP**

Dated: December 2, 2005

By: 

David B. Hardy  
Reg. No. 47,362

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